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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/681,893	10/09/2003	Kyoji Hamamoto	13425.43US01	9599
23552	7590	05/20/2005	EXAMINER	
MERCHANT & GOULD PC P.O. BOX 2903 MINNEAPOLIS, MN 55402-0903			MANCHO, RONNIE M	
			ART UNIT	PAPER NUMBER
			3663	
DATE MAILED: 05/20/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/681,893

Applicant(s)

HAMAMOTO ET AL

Examiner

Ronnie Mancho

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 10/9/03.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

EA

MC

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-3 are rejected under 35 U.S.C. 102(b) as being anticipated by Mukai et al (5844387).

Regarding claim 1, Mukai et al (figs. 4, 5; columns 2 & 3) disclose a control apparatus for an electric power steering system, which controls a motor 8 for applying assist steering torque (abstract) to a steering line of a vehicle at least according to steering torque signal (T) of the steering line detected by a steering torque sensor 10, vehicle velocity signal detected by a vehicle velocity sensor 11 and motor current signal (Imd) detected by a motor current detector 14, the control apparatus comprising:

a target current controller 15 (col. 2, lines 1-20) for setting target current signal (Ims) for driving the motor 8 according to the steering torque signal (T);

a deviation calculator 16 for computing a deviation (delta I, col. 2, lines 1-20, lines 56-64) between the target current (Ims) and motor current signals (Imo);

a deviation adjuster for adjusting (i.e. bring to zero; col. 2, lines 56-64) the deviation (delta I) with a variable gain according to the vehicle velocity signal;

a proportional element 17 (col. 2, lines 21-28) for executing proportional control for the motor according to the deviation;

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an integral element 17 (col. 2, lines 21-28) for executing integral control for the motor according to the deviation; and

a gain adjuster (i.e. bring to zero; col. 2, lines 65 to col. 3, lines 1-9) for adjusting the gain according to a differential of the steering torque signal (i.e. when the steering torque is applied to the left side in other words different from the right side; col. 2, lines 65 to col. 3, lines 1-9).

Regarding claim 2, Mukai et al (figs. 4, 5; columns 2 & 3) disclose the control apparatus according to claim 1 wherein the gain adjuster is adapted to adjust the gain according to the differential of steering torque when the differential reaches equal to or greater than a predetermined value.

Regarding claim 3, Mukai et al (figs. 4, 5; columns 2 & 3) disclose method for controlling an electric power steering system, which controls a motor for applying assist steering torque (T) to a steering line of a vehicle at least according to steering torque signal of the steering line detected by a steering torque sensor 10, vehicle velocity signal detected by a vehicle velocity sensor 11 and motor current signal detected by a motor current detector 14, the method comprising the steps of:

setting target current signal (I_{ms}) for driving the motor according to the steering torque signal (T);

computing a deviation (ΔI) between the target current (I_{ms}) and motor current signals (I_{mo});

adjusting (i.e. bring to zero; col. 2, lines 56-64) the deviation (ΔI) with a variable gain according to the vehicle velocity signal;

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executing proportional control (col. 2, lines 21-28) for the motor according to the deviation (δI);

executing integral control (col. 2, lines 21-28) for the motor according to the deviation; and

adjusting (i.e. bring to zero; col. 2, lines 65 to col. 3, lines 1-9) the gain according to a differential of the steering torque signal (i.e. when the steering torque is applied to the left side in other words different from the right side; col. 2, lines 65 to col. 3, lines 1-9).

3. Claims 1-3 are rejected under 35 U.S.C. 102(b) as being anticipated by Mukai (JP 08-332969).

4. Regarding claims 1-3 Mukai (JP 08-332969) anticipates the all limitations therein. Even though it is the same inventor, the rejection is proper because it is a statutory bar.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following: US006407524B1, US005982137A, US 20020053481A1, US006013994A, and US006240350B1 all disclose a power steering apparatus.

Communication

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ronnie Mancho whose telephone number is 703-305-6318. The examiner can normally be reached on Mon-Thurs: 9-5.

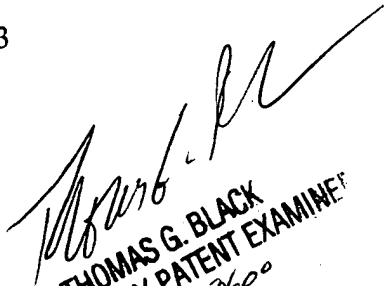
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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Black can be reached on 703-305-9707. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Ronnie Mancho
Examiner
Art Unit 3663

5/10/05


THOMAS G. BLACK
SUPERVISORY PATENT EXAMINER
GROUP 3600